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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,645	06/26/2001	George Popovich	CM04520H	5524
22917	7590	04/19/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			SHAH, CHIRAG G	
			ART UNIT	PAPER NUMBER
			2664	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/891,645	Applicant(s) POPOVICH, GEORGE	
	Examiner Chirag G Shah	Art Unit 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-16 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/26/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 6/26/01 has been considered by the examiner and an initialed copy is being submitted with this office action.

Specification

2. The abstract of the disclosure is objected to because the length exceeds 150 words. Correction is required. See MPEP § 608.01(b).
3. The specification is objected to because of the following informalities: The title, "Summary of Invention" is missing. The title may be inserted after, line 12 on page 3 of the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 6,765,927), hereinafter Martin in view of Braden et al. (RSVP Version 1, RFC 2205), hereinafter Braden.
6. Regarding claim 1, Martin discloses in **figures 1 and 4** of a communication system including one or more participating hosts [**Host 110 and 120 of figure 1**] logically connected by

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at least one packet network link [as in **figure 1**, the backbone network 130, having links connecting switch 140 and 160 on which RSVP path and RSVP reserve message flow across], the participating hosts [Host 110 and 120 as in **figure 1**] being associated with one or more reservation proxy elements [as disclosed in claim 9, where switch 140, has an RSVP host proxy agent], a method comprising the reservation proxy elements [Switch 140 including an RSVP host proxy agent 248 and functions as a proxy for reserving a path for transmission as disclosed in claim 9 and in col. 3, lines 15-27] performing steps of:

receiving a multicast group address [destination address] to be used for a prospective communication between the participating hosts [as disclosed in col. 3, lines 15-27, edge switch 140 receives the data packet having an address of sources host 110 as a source address and a destination address. Note as disclosed in col. 8, lines 4-10, the invention may be applied to multicast flows between a source host and multiple destination hosts, wherein one or more switches act as RSVP host proxies for the sources host and/or one or more destination hosts. Thus this implies, in a multicast scenario, the switch 140 receives a multicast group address as the destination address];

exchanging one or more control messages [as disclosed in col. 3, lines 15-45, RSVP Path and RSVP Resv messages] across the packet network link [as disclosed in figure 1, backbone 130 supporting (packetized data) across link between switch 140 and 160], thereby signaling one or more network devices [switch 160 in figure 1] to establish a reservation of communication resources on the packet network link for the prospective communication [as disclosed in figure 1 and in col. 3, lines 15-45, the edge switch 140 functioning as a proxy, exchanges RSVP Path messages and RSVP Resv message on the transmission medium

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interconnection destination host 120 and edge switch 160, upon edge switch 160 receiving an RSVP Resv message in conjunction with policy server and in accordance with the RSVP router function, determines whether or not to accept the reservation].

Martin discloses in col. 2, lines 67 to col. 3, lines 5 that edge switches 140 and 160 support router function of RSVP and further disclose in col. 5, lines 44-48 that edge switches may be routers or gateways, but explicitly fails to disclose of the edge switch performing the step of joining the multicast group prior to exchanging control information messages across packet network link.

Braden teaches of a **Router using RSVP in figure 9**. Braden further **discloses on page 27, section 2.10**, a receiver (router RSVP) joins the multicast group specified by Dest Address (the IP destination address of data packets, may be a unicast or multicast address as disclosed in last paragraph of page 6). Braden furthermore, **discloses on page 28-2nd bullet**, that when a new sender starts sending data but there are no multicast routes because no receivers have joined the group (H1). Then the data will be dropped at a router node. Thus, the receiver of the data (router) joins the multicast group as specified by the destination (multicast) address in the data. In addition, as mention before, when no multicast routes are available, the data gets dropped at the router node, which clearly signifies the RSVP router's role as a proxy. Thus, the proxy router joins the multicast address prior to exchanging the control message and after receiving a multicast group address.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include the step of the proxy element joining the multicast group prior to exchanging control messages as taught by Braden. One is motivated

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for the receiver (router) to join the multicast group in order to appropriately and correctly forward path messages towards all the destination (multicast) addresses using their local multicast routing table for establishing bandwidth link reservation.

Regarding claim 2, Martin discloses wherein the reservation proxy elements (**the switch 140 having RSVP sender host proxy agent 248 as disclosed in figure 2**) are incorporated within one or more controllers (**switch 140 as disclosed in col. 5, lines 44-48 and figure 2 that edge switches may be routers or gateway, which control RSVP proxy agent 248**) of the communication system as claim.

Referring to claim 3, Martin discloses in figure 1 wherein the participating hosts [110 and 120] are distributed among a plurality of zones [zone 1-including Edge switch 140, Policy Server 150 and Host 110; and zone 2 being Edge switch 160, Policy Server 170 and Host 120] of the communication system, the at least one packet network link [**as disclosed in figure 1, backbone 130 supporting (packetized data) across link between switch 140 and 160**], comprising an inter-zone link [**Note: Edge switches communicating wirelessly with hosts separated by links as disclosed in figure 1 signifies a plurality of zones, which is read in light of the specification on page 4, where it is written that a plurality of zone includes a plurality of base stations communicating via RF resources with wireless communication units**] as claim.

Regarding claim 4, Martin discloses in **col. 3, lines 33-46** of receiving, from the one or more network devices [**edge switch 160**], confirmation of the reservation [**as disclosed in col. 3,**

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lines 33-46, the edge switch 160 receives from the destination host 120, a request for reservation and Edge switch 160 in conjunction with policy server 170 makes a decision whether or not to accept the reservation and sends the RSVP Res message which has a confirmation decision to edge switch 140]; and

communicating, to a controller (**switch 140**), indicia of availability of the communication resources on the packet network link for the prospective communication [**as disclosed in col. 4, lines 27-38, QoS manager 242 facilitates QoS establishment on edge switch 140 controller in accordance with accepted QoS reservations**] as claim.

Regarding claim 5, Martin discloses **in col. 3, lines 33-53 and in col. 4, lines 27-38** wherein upon the controller [**switch 140**] receiving indicia of availability of the communication resources [**edge switch 160 upon determining to accept the reservation sends RSVP Resv message to edge switch 140 of the availability of resource**] on the packet network link [**via backbone 130 supporting packetized link**] for the prospective communication, the controller [**switch 140**] performs the step of:

granting the call request [**as disclosed in col. 3, lines 47 to col. 4, lines 2 and in col. 4, lines 27-38, Edge Switch 140 having management interface 240 and network interfaces to host are linked by bus 260 for transmitting and receiving management information including QoS information for various flows, the QoS information contains accepted call grant reservations**].

Martin fails to explicitly disclose instructing the participating hosts to join the multicast group address to participate in an active call.

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Braden discloses **on page 27, section 2.10**, that before a session can be created, the session identification must be assigned and communicated to all the senders and receivers. Furthermore, receiver hosts joins the multicast group specified by DestAddress, using IGMP. Thus, the controller (RSVP router of figure 9), upon receiving upon receiving RSVP Res message may forwards QoS information having DestAddress of the flows. Note as disclosed in the last paragraph of page 6, in multicast scenario, the IP destination address of data packets, may be a multicast address.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include receiver host joining the multicast group address as taught by Braden. One is motivated for participating hosts to join the multicast group address in order to establish a communication session for all communicative entities over a reservation path.

Regarding claim 6, Martin discloses in **figure 3b and in col. 5, lines 15-19**, wherein at least one of the one or more reservation messages [**RSVP Resv message**] includes the multicast group address [**destination address**] for the prospective communication [**Note, as mentioned before, col. 8, lines 4-10 clearly discloses that invention may be applied to multicast flows and thus in that case the destination address would be multicast group address**] as claim.

Regarding claim 7, Martin discloses in **col. 3, lines 15-45** wherein the step of exchanging one or more Control messages (**RSVP Path messages and RSVP Resv Messages**) comprises:

sending, from a sourcing reservation proxy element [**edge switch 140**] of the one or more reservation proxy elements, a first control message [**RSVP Path message**] across the packet network link [**as in figure 1, the backbone network 130, having links connecting switch 140 and 160 on which RSVP path and RSVP reserve message flow across**], the first control message being addressed to the multicast group address [**as disclosed in figure 3a, col. 4, lines 64-67, RSVP Path message includes source and destination addressing information and as mentioned before, col. 8, lines 4-10 clearly discloses that invention may be applied to multicast flows**];

receiving, by one or more receiving reservation proxy element having joined the multicast group address, the first control message [**as disclosed in col. 3, lines 20-32, the RSVP path message traverses the backbone network 130 and edge switch 160 along a flow-path between source host 110 and destination host 120**]; and

sending, by the receiving reservation proxy elements responsive to the first control message, respective second control messages across the packet network [**as disclosed in col. 3, lines 33-45, Edge switch 160 receives the RSVP Resv message and traverses the RSVP Resv messages across backbone network 120 and edge switch 140**] as claim.

Regarding claim 8, Martin discloses in **col. 3, lines 20-45** wherein the first control message comprises an **RSVP path message** and the second control messages comprise **RSVP reserve messages** as claim.

Regarding claim 9, Martin discloses in **col. 3, lines 20-32** of switch 140 of transmitting a RSVP Path message. Martin also discloses in **col. 8, lines 4-10** that invention may be applied to multicast flows.

Martin, however fails to disclose wherein the RSVP path messages include a wildcard filter protocol, allowing for the reservation of communication resources on the packet network link to be used by an unspecified host of the participating hosts.

Braden discloses **on page 10, section 1.3** that when an RSVP reservation request is made, it includes a set of option that are collectively called the reservation “style”. Braden also discloses **on page 31 under the Style section** of the RSVP protocol that reservation style is required in every Resv message. Braden further discloses **on page 11 and in figure 5 of a request incorporating a wildcard-filter (WF) reservation protocol**. The WF style implies shared reservation and wildcard sender selection. A WF-style reservation creates a single reservation shared by flows from all upstream senders and may be thought of as a shared “pipe”, whose “size” is the largest of the resource requests from all receivers, independent of the number of senders using it.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include a reservation request incorporating a wildcard-filter reservation protocol as taught by Braden. One is motivated for incorporating a wildcard-filter reservation protocol as disclosed on page 12 for those multicast applications such as packetized audio in which multiple data sources are unlikely to transmit simultaneously, wildcard filter style, when there is a large list of senders, results in considerably less overhead.

Regarding claim 10, Martin discloses in **col. 3, lines 20-32 of switch 140** transmitting a RSVP Path message. Martin also discloses in **col. 8, lines 4-10** that invention may be applied to multicast flows.

Martin, however fails to disclose wherein the RSVP path messages include a shared explicit protocol, allowing for the reservation of communication resources on the packet network link to be used by any one of a plurality of specified hosts of the participating hosts.

Braden discloses on **page 10, section 1.3** that when an RSVP reservation request is made, it includes a set of option that are collectively called the reservation “style”. Braden also discloses on **page 31 under the Style section** of the RSVP protocol that reservation style is required in every Resv message. Braden further discloses on **page 11 and in figure 7 of a request incorporating a Shared Explicit (SE) reservation protocol**. The SE style implies shared reservation and explicit sender selection. An SE-style reservation creates a single reservation shared by selected upstream senders and allows a receiver to explicitly specify the set of sender to be included.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include a reservation request incorporating a Shared Explicit reservation protocol as taught by Braden. One is motivated for incorporating an SE reservation protocol as disclosed on page 12 for those multicast applications such as packetized audio in which multiple data sources are unlikely to transmit simultaneously, SE reservation allows a receiver to explicitly specify the set of sender to be included for reservation.

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Regarding claim 11, Martin discloses in **col. 3, lines 20-32 of switch 140** transmitting a RSVP Path message. Martin also discloses in **col. 8, lines 4-10** that invention may be applied to multicast flows.

Martin, however fails to disclose wherein the RSVP path messages include a fixed filter protocol, allowing for the reservation of communication resources on the packet network link to be used by each one of a plurality of specified hosts of the participating hosts.

Braden discloses on **page 10, section 1.3** that when an RSVP reservation request is made, it includes a set of option that are collectively called the reservation “style”. Braden also discloses on **page 31 under the Style section** of the RSVP protocol that reservation style is required in every Resv message. Braden further discloses on **page 11 and in figure 6 of a request incorporating a Fixed Filter (FF) reservation protocol**. The FF style implies distinct reservations and explicit sender selection. FF-style reservation request creates a distinct reservation for data packets from a particular sender, not sharing then with other sender’ packets for the same session.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Martin to include a reservation request incorporating a Fixed Filter reservation protocol as taught by Braden. One is motivated for incorporating an FF reservation protocol as disclosed on page 12 for those applications such as video signals which create distinct reservations for the flows from different senders.

Allowable Subject Matter

7. Claims 12-16 allowed.
8. The reason for Allowance of claim 12 is that prior art fails to disclose and/or teach a communication system including one or more reservation proxy element associated with a plurality of zones having a method comprising of determining locations of one or more participating devices for the call, thereby determining a number of participating zones of the plurality of zones, the reservation proxy elements associated with the participating zones defining participating reservation proxy elements in combination with limitations set forth in the respective claim.

Conclusion

Any response to this action should be mailed to:

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Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 6:45 to 4:15, 2nd Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs

March 7, 2005

A handwritten signature in black ink, appearing to read 'Chirag Shah', is written over the printed name.

Chirag Shah
Patent Examiner
AU 2664